

The Wisconsin Department of Commerce proposes an order to: renumber Comm 64.0403 (3) as 64.0403 (3)(b); Comm 64.0604 (1) as 64.0604 (3); and Comm 64.0605 (2) as 64.0605 (4); amend Comm 64.0309 (1); 64.0403 (5)(a), (b)1.a., and (c)1.; 64.0403 Table 64.0403; and 64.0605(1); repeal and recreate Comm 64.0401(4)(a)(intro.); and create Comm 64.0300; 64.0401 (4)(a) 4. and (4)(b) 5.; 64.0403(3)(a) and (4)(a)6.; 64.0403(5)(d); 64.0604(1); 64.0605(2) and (3); and 64.0900, relating to heating, ventilating and air conditioning and the Wisconsin changes, additions, substitutions or omissions to the International Mechanical Code® (IMC).

ANALYSIS OF PROPOSED RULES

Statutory Authority and Statutes Interpreted:

Statutory authority: ss. 101.02 and 101.025, Stats.
Statutes interpreted: ss. 101.02 and 101.025, Stats.

Under s. 101.025, Stats., the department authority includes requirements for the intake of outside air for ventilation in public buildings or places of employment; the establishment of minimum quantities of outside air that must be supplied based upon the type of occupancy, the number of occupants, areas with toxic or unusual contaminants; and other pertinent criteria determined by the department. The department shall set these standards for mandatory intake of outside air and provisions where these standards may be waived.

The proposed revisions to ch. Comm 64, relating to heating, ventilating and air conditioning and the Wisconsin changes, additions or omission to the International Mechanical Code® (IMC), are primarily related to air-handling systems, particularly ventilation and filtration requirements, located in specific hospital and healthcare occupancies in conformance with specifications contained in the Guidelines for Design and Construction of Hospitals and Health Care Facilities published by the American Institute of Architects (AIA). The proposed modifications herein are based upon the adopted changes to chs. Comm 50 to 64, that will become effective on July 1, 2002 as chs. Comm 14 and 61 to 65 [CR 00-179)].

Section Comm 64.0309 is proposed to clarify that minimum temperatures are required to be maintained during occupancy. Section Comm 64.0401 recognizes that engineered systems are also an option when addressing the location of outdoor air intakes. One change to Table 64.0403 prohibits the use of natural ventilation for make up air in health care facilities. Section Comm 64.0604 is proposed to provide requirements in addition to IMC section 604 and 604.8 limiting the use of certain duct linings so as to mitigate fungal and microbial growth. Section Comm 64.0605 (1) clarifies the specific sections in the AIA Guidelines where filtration is stipulated. Section Comm 64.0900 is proposed to be created to clarify the use of final filters in duct humidifiers.

The proposed rule revisions were developed with the assistance of the HVAC Advisory Code Council. The Council consists of the following individuals: Timothy J. Gasperetti, representing the Building Owners and Managers Association of Milwaukee; Kevin Lichtfuss, representing the Wisconsin Association of Consulting Engineers; Michael Mamayek, representing the Plumbing and Mechanical Contractors of SE Wisconsin; Ken Pavlik, representing the Wisconsin Builders Association; Richard J. Pearson, representing the Wisconsin Chapter ASHRAE; Robert Pertzborn, representing the Wisconsin Association of Plumbing, Heating and Cooling Contractors, Inc.; David Stockland, representing the Associated Builders and Contractors of Wisconsin Ltd; Harry A. Sulzer, representing the League of Wisconsin Municipalities; and Robert D. Wiedenhoefer, representing the Sheet Metal and Air Conditioning Contractors Association of Wisconsin, Inc.

SECTION 1. Comm 64.0300 is created to read:

Comm 64.0300 Specific criteria for operating rooms and autopsy rooms. This is a department rule in addition to the requirements in IMC chapter 3: In operating rooms of hospitals and ambulatory surgery centers rooms and autopsy rooms, the bottoms of ventilation supply and return openings shall be at least 3 inches above the floor.

SECTION 2. Comm 64.0309 (1) is amended to read:

Comm 64.0309 (1) HEATING SYSTEM DESIGN. Except as provided in subds. (2) or (3), the heating system shall be designed and operated to maintain a temperature of not less than that shown in Table 64.0403 at 3 feet above the floor within the occupied space during occupied periods.

SECTION 3. Comm 64.0401 (4) (a) (intro.) is repealed and recreated to read:

Comm 64.0401 (4) (a) Substitute the following wording for the requirements in IMC section 401.5.1:

SECTION 4. Comm 64.0401 (4) (a) 4. is created to read:

Comm 64.0401 (4) (a) 4. For health care facilities all of the following shall apply:

a. Except as provided under subpar. b., outdoor air intakes shall be located at least 25 feet from exhaust outlets of ventilating systems, combustion equipment stacks, medical-surgical vacuum systems, plumbing vents or areas that may collect vehicular exhaust or other noxious fumes.

b. Plumbing and vacuum vents that terminate at a level above the top of the air intake may be located as close as 10 feet to an outdoor air intake.

c. The bottom of outdoor air intakes serving central systems shall be located at least 6 feet above ground level or, when installed above the roof, at least 3 feet above roof level.

d. Exhaust outlets from areas that may be contaminated shall be located above roof level and arranged to minimize recirculation of exhaust air into the building.

SECTION 5. Comm 64.0401 (4) (b) 5. is created to read:

Comm 64.0401 (4) (b) 5. Where it can be demonstrated that an engineered system design will

prevent the maximum concentration of contaminants brought in through the outside air intake from exceeding the maximum contaminant concentration obtainable by providing the separation distances in accordance with sub. (4) (a), the outdoor air intakes may be located in accordance with such engineered system design.

SECTION 6. Comm 64.0403 (3) is renumbered as Comm 64.0403 (3) (b).

SECTION 7. Comm 64.0403 (3) (a) is created to read:

Comm 64.0403 (3) (a) These are department rules in addition to the requirements in IMC section 403.2:

1. In hospitals and ambulatory surgery centers, air supply for operating rooms and delivery rooms that are designed for cesarean sections shall be provided from ceiling outlets located near the center of the work area. Return-air inlets shall be located near the floor level. Each operating room and delivery room designed for cesarean-section deliveries shall have at least 2 return-air inlets located as remotely from each other as practical.

2. In hospitals and ambulatory surgery centers, air supply outlets for rooms used for invasive procedures shall be located at or near the ceiling. Return or exhaust air inlets shall be located near the floor level. Exhaust grills for anesthesia evacuation and other special applications may be installed in the ceiling.

SECTION 8. Comm 64.0403 (4) (a) 6. is created to read:

Comm 64.0403 (4) (a) 6. Recirculation and flow of air in health care facilities shall comply with the requirements in Table 2 or Table 6, as applicable, of AIA Guidelines for Design and Construction of Hospitals and Health Care Facilities.

SECTION 9. Comm 64.0403 (5) (a), (b) 1. a. and (c) 1. are amended to read:

Comm 64.0403 (5) (a) General. ~~Each~~ Except as specified in par. (d), each room served by a common mechanical ventilation system shall be provided with the minimum outdoor airflow rate determined individually for each room, or the minimum amount of outside air may be supplied to the system if a minimum air change rate for each room is either provided in accordance with this section or waived in accordance with par. (c).

(b) *Minimum air change.* 1. 'Application.' a. ~~Required~~ The required air change shall be provided while people are present.

(c) *Air change requirement waived.* The air change requirement for 6 air changes per hour may be omitted in any of the following applications:

1. ~~Spot~~ Buildings or rooms utilizing spot heating as the only source of heat.

SECTION 10. Comm 64.0403 (5) (d) is created to read:

Comm 64.0403 (5) (d) *Air change rates in health care facilities.* Air change rates in health care facilities shall comply with the requirements in Table 2 or Table 6, as applicable, of AIA Guidelines for Design and Construction of Hospitals and Health Care Facilities.

SECTION 11. Comm 64.0403 (6) Table 64.0403 (partial) is amended to read:

Table 64.0403 (partial)
Required Minimum Inside Temperature and Outdoor Ventilation Air

Occupancy Classification ⁱ	Ventilation Requirements				
	Basis of Capacity				
	Minimum Inside Temperature (degrees F)	Estimated Maximum Occupant Load (persons per 1,000 sq. ft.) ^a	Natural Ventilation Allowed	Exhaust ^e (cfm/net sq. ft. floor area)	Air Change Rate ^k (minimum air change per hour with A/C)
<u>Health care facilities</u> Hospitals Nursing homes Ambulatory surgery centers	footnote m	footnote m	footnote m <u>no</u>	footnote m	footnote m

SECTION 12. Comm 64.0604 (1) is renumbered as Comm 64.0604 (3).

SECTION 13. Comm 64.0604 (1) is created to read:

Comm 64.0604 (1) GENERAL. These are department rules in addition to the requirements in IMC sections 604 and 604.8:

(a) 1. Except as provided under subd. 2., in hospitals and ambulatory surgery centers, duct linings exposed to air movement shall not be used in ducts serving operating rooms, delivery rooms, labor, delivery and recovery rooms, nurseries, protective environment rooms and critical care units.

2. In hospitals and ambulatory surgery centers, the requirement in subd. 1. does not apply to mixing boxes and acoustical traps that have special coverings over such lining to mitigate fungal and microbial growth.

(b) In hospitals and ambulatory surgery centers, duct lining shall not be installed within 15 feet downstream of humidifiers or as necessary to prevent moisture accumulation in the lining.

SECTION 14. Comm 64.0605 (1) is amended to read:

Comm 64.0605 (1) ~~Hospitals~~ Central air handling systems in hospitals, nursing homes and ambulatory surgery centers shall comply with the applicable filtration requirements in Tables 2 and 6, part III specified in section 7.31.D8, 8.31.D5, 9.31.D8 or 11.31.D4 of the AIA Guidelines for Design and Construction of Hospitals and Health Care Facilities.

SECTION 15. Comm 64.0605 (2) is renumbered as Comm 64.0605 (4).

SECTION 16. Comm 64.0605 (2) and (3) are created to read:

Comm 64.0605 (2) Non-central air handling systems in hospitals, nursing homes and ambulatory surgery centers shall be equipped with permanent cleanable or replaceable filters with a minimum efficiency of 68 percent weight arrestance.

(3) In hospitals and ambulatory surgery centers, non-central air handling systems shall be used as recirculating units only. All outdoor air requirements shall be met by a separate central air handling system with the filtration as provided in sub. (1).

SECTION 17. Comm 64.0900 is created to read:

Comm 64.0900 Specific criteria for duct humidifiers. These are department rules in addition to the requirements in IMC chapter 9:

(1) For duct humidifiers located upstream of final filters in a hospital or ambulatory surgery center all of the following shall apply:

(a) The duct humidifier shall be located at least 15 feet upstream of the final filters.

(b) The ductwork with duct-mounted humidifiers shall have a means of water removal.

(c) An adjustable high-limit humidistat shall be located downstream of the humidifier to reduce the potential of condensation inside the duct.

(d) All duct takeoffs shall be sufficiently downstream of the humidifier to ensure complete moisture absorption.

(2) For all other humidifiers located in hospitals or ambulatory surgery centers all of the following shall apply:

(a) Steam humidifiers shall be used.

(b) Reservoir-type water spray or evaporative pan humidifiers shall not be used.

EFFECTIVE DATE

Pursuant to s. 227.22 (2) (b), Stats., these rules shall take effect on July 1, 2002 after publication in the Wisconsin Administrative Register.

(end)